

ABSTRACT

A trench-gated MOSFET formed using a super self aligned (SSA) process employs an insulating layer such as a glass layer and a contact mask to define contact openings for electrical connections to source regions of the MOSFET. Use a contact mask and an intervening glass in otherwise self-aligned process reduces the coupling capacitance between source metal and the top of the embedded trench gate. A metal layer deposited to make electrical contact to source regions can be planarized, for example, ground flat using chemical-mechanical polishing to provide a flat surface to avoid formation of conductive traces that extend over the steps that the glass layer forms.